UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

77213

7590

03/05/2009

Novak Druce + Quigg, LLP 1300 Eye Street, NW, Suite 1000 Suite 1000, West Tower Washington, DC 20005 EXAMINER

MCGUTHRY BANKS, TIMA MICHELE

ART UNIT PAPER NUMBER

1793

DATE MAILED: 03/05/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,354	05/03/2007	Paul Alexander De Vries	8674.038.US0000	5204

TITLE OF INVENTION: METHOD OF COOLING MOLTEN METAL DURING FRACTIONAL CRYSTALLISATION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/05/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where m

appropriate. All further indicated unless correct maintenance fee notifica	ed below or directed otl	ng the Patent, advance on erwise in Block 1, by (orders and notification of r a) specifying a new corres	naintenance fees v spondence address;	vill be and/or	mailed to the current (b) indicating a sepa	correspondence rate "FEE ADD	address as RESS" for
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address) 77213 7590 03/05/2009				Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.				
						of Mailing or Trans	niccion	
Suite 1000, Wes	, NW, Suite 1000 st Tower	I he Stat addı tran	reby certify that the es Postal Service vecsed to the Mail	is Fee(: vith suf Stop	s) Transmittal is being ficient postage for firs ISSUE FEE address 1) 273-2885, on the definition of t	deposited with t class mail in ar above, or being	the United 1 envelope 5 facsimile 5w.	
Washington, DC	2 20005						(Depo	ositor's name)
								(Signature)
								(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTO	RNEY DOCKET NO.	CONFIRMATIO	ON NO.
10/577,354	05/03/2007		Paul Alexander De Vries		86	574.038.US0000	5204	
TITLE OF INVENTION	: METHOD OF COOLI	NG MOLTEN METAL I	DURING FRACTIONAL (CRYSTALLISATI	ON		_	
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSU	E FEE	TOTAL FEE(S) DUE	DATE D)UE
nonprovisional	NO	\$1510	\$300	\$0		\$1810	06/05/2009	009
EXAM	IINER	ART UNIT	CLASS-SUBCLASS]				
MCGUTHRY BANK	KS, TIMA MICHELE	1793	075-588000					
	oondence address (or Cha B/122) attached. lication (or "Fee Address D2 or more recent) attach	(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a						
PLEASE NOTE: Un recordation as set fort (A) NAME OF ASSI	less an assignee is ident h in 37 CFR 3.11. Comp GNEE	ified below, no assignee pletion of this form is NC	THE PATENT (print or type data will appear on the port a substitute for filing an (B) RESIDENCE: (CITY	atent. If an assign assignment. 'and STATE OR C	COUNT	RY)		
Please check the appropr	riate assignee category or	categories (will not be p	rinted on the patent):	Individual 🖵 Co	orporati	on or other private gro	up entity 🚨 Go	overnment
	are submitted: No small entity discount p # of Copies	4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) ☐ A check is enclosed. ☐ Payment by credit card. Form PTO-2038 is attached. ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).						
5. Change in Entity Sta	,		D					
**	s SMALL ENTITY state		b. Applicant is no loned from anyone other than t					
interest as shown by the	records of the United Sta	ites Patent and Trademarl	k Office.	пе аррисан; а геді	stered	tuorney or agent; or th	e assignee of our	er party in
Authorized Signature				Date				_
Typed or printed name			Registration No					
This collection of inform an application. Confiden submitting the complete this form and/or suggest Box 1450, Alexandria, V Alexandria, Virginia 223	tiality is governed by 35 d application form to the ions for reducing this bu /irginia 22313-1450. DC	CFR 1.311. The informati U.S.C. 122 and 37 CFR USPTO. Time will vary rden, should be sent to the ONOT SEND FEES OR	on is required to obtain or n 1.14. This collection is est y depending upon the indiv he Chief Information Office COMPLETED FORMS TO	retain a benefit by t imated to take 12 t ridual case. Any co er, U.S. Patent and D THIS ADDRESS	he publ minutes omment Traden S. SENI	ic which is to file (and to complete, includin s on the amount of tir nark Office, U.S. Depa O TO: Commissioner	by the USPTO of g gathering, prepare you require to the trument of Common Patents, P.O.	to process) paring, and complete herce, P.O. Box 1450,

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

OMB 0651-0033

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE



United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450

P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,354	10/577,354 05/03/2007 Paul Alexander De Vries		8674.038.US0000	5204
77213	7590 03/05/2009		EXAM	INER
Novak Druce +	Novak Druce + Quigg, LLP			S, TIMA MICHELE
1300 Eye Street,	1300 Eye Street, NW, Suite 1000			PAPER NUMBER
Suite 1000, West Tower Washington, DC 20005			1793 DATE MAILED: 03/05/200	9

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 116 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 116 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	T =	T
	Application No.	Applicant(s)
Netice of Allemahility	10/577,354	DE VRIES ET AL.
Notice of Allowability	Examiner	Art Unit
	TIMA M. MCGUTHRY-BANKS	1793
The MAILING DATE of this communication appe All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this ap or other appropriate communicatio IGHTS. This application is subject to	oplication. If not included n will be mailed in due course. THIS
1. \boxtimes This communication is responsive to <u>the papers filed 12/31</u>	<u>1/08</u> .	
2. ☑ The allowed claim(s) is/are <u>1-12</u> .		
 3. Acknowledgment is made of a claim for foreign priority un a) All b) Some* c) None of the: 1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 	e been received.	
3. Copies of the certified copies of the priority doc	cuments have been received in this	national stage application from the
International Bureau (PCT Rule 17.2(a)).		
* Certified copies not received:		
Applicant has THREE MONTHS FROM THE "MAILING DATE" on noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 4. A SUBSTITUTE OATH OR DECLARATION must be submit	IENT of this application.	
INFORMAL PATENT APPLICATION (PTO-152) which give		
5. CORRECTED DRAWINGS (as "replacement sheets") mus		
(a) I including changes required by the Notice of Draftspers	• •	-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date		
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date		
Identifying indicia such as the application number (see 37 CFR 1. each sheet. Replacement sheet(s) should be labeled as such in the		
6. DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT I		
Attachment(s)	5 Distance On Comment	Detect Application
1. Notice of References Cited (PTO-892)	5. Notice of Informal I	
 Notice of Draftperson's Patent Drawing Review (PTO-948) MInformation Disclosure Statements (PTO/SB/08), 	6.	ate
Paper No./Mail Date See Continuation Sheet 4. Examiner's Comment Regarding Requirement for Deposit		ent of Reasons for Allowance
of Biological Material	9. ☐ Other	ent of Neasons for Allowance

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 1/22/09,12/31/08,11/26/08.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: the response filed 1/22/2009 was sufficient to overcome the rejection under 35 U.S.C. 103(a) because US 7,419,530 and the instant invention were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person.

The terminal disclaimer filed on 12/31/2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 7,419,530 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The information disclosure statements (IDS) submitted on 1/22/09, 12/31/08 and 11/26/08 were filed after the mailing date of the non-final rejection on 11/18/2008. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Application/Control Number: 10/577,354 Page 3

Art Unit: 1793

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMA M. MCGUTHRY-BANKS whose telephone number is

(571)272-2744. The examiner can normally be reached on M-F 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. M. M./

Examiner, Art Unit 1793

5 March 2009

/George Wyszomierski/ Primary Examiner

Art Unit 1793